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First Annual Report of the Registrar-General on Births, Deaths, and Marriages in England, in 1837-8.

As this Report has been very recently presented to Parliament we can advert but briefly to the many important Statistical facts which it embodies. With the census, the registration of marriages, births, deaths, and diseases, constitutes the basis of almost all Statistical operations, so that the success of the Registration Acts introduced by Lord John Russell has been regarded by Statisticians with considerable anxiety. The Act had a twofold object in view: the first aimed at the registration of births, deaths, and marriages, as civil acts, irrespectively of religious differences. In this sense it was an extension of the principles of religious liberty, and has relieved Dissenters from the pressure of grievances under which they previously laboured. The record of the births, deaths, diseases, and marriages of the people of England, as Statistical facts by which the condition and progress of the population might be accurately noted, was a still more important object of the Act.

Important and obvious as are the applications of the registered facts, the measure had to encounter considerable opposition. Its advantages were scarcely perceived at first by the multitude; and some of the clergy of the Established Church threw obstacles in its way, under an erroneous apprehension that the registration of births might interfere with the administration of baptisms. By taking active steps to make known in every way the nature, advantages, and obligations of the Act, and by a firm, but conciliatory conduct, the Registrar-General appears to have succeeded beyond the most sanguine expectations, in obtaining, during the first year of its operation, an almost complete register of deaths and marriages. The register of births is less complete; but this is owing to the want of a clause in the Act to render the information of births imperative.

The country is divided into 618 districts, over each of which is appointed a Superintendent-Registrar, and which are generally coincident with the poor law unions. In the latter end of 1838 there were 2,193 Registrars employed. Certified copies are transmitted to the General Register Office quarterly: they are collected by the Superintendent-Registrars from more than 14,000 persons charged with the duty of compiling them. More than 80,000 separate papers, containing 847,149 entries, have been thus transmitted, of which 739,737 (being all the entries of births and deaths, and such marriages as are registered by the Registrar of Marriages) have been compared with the original by the Superintendent-Registrar, and certified to be correct. The certified copies are examined, arranged, and indexed at the General Register Office, and there the abstracts are made which are contained in the Annual Report.

In the year ending June 30th, 1838, it appears that 111,481 marriages were registered; 107,201 according to the rites of the Established Church, namely, 9 by special license, 13,677 by license, 68,410 by bans, and 493 by a certificate from a Superintendent-Registrar; while in 24,612 instances it was not stated in which of the foregoing forms the marriage was performed: 4,280 marriages took place *not* according to the rites of the Established Church, namely, 2,976 in registered places of worship, 1,093 in the offices of Superintendent-Registrars, 76 between Quakers, and 135 between Jews. In the first quarter 24,030

marriages were registered, in the second 34,449, in the third 23,201, in the fourth 29,801. The mean of the three last quarters was 29,150; and this would make the annual number 116,600, while, according to former estimates, the number should have been 116,000.

399,712 births were registered—204,863 of males, 194,849 of females. The numbers registered in the first quarter amounted to 74,588, in the second to 89,528, in the third to 113,815, in the fourth 121,781. The registration of births “has, since the commencement, made a considerable and progressive advance; and during the fourth quarter of the first year attained a superiority in point of numbers over the average registration of baptisms,” which, it is estimated by the Registrar-General, would have amounted to 111,147 quarterly in 1837-8. It is, on every account, greatly to be desired that the registration of births should be rendered complete; but this appears scarcely attainable, unless the Act of Registration shall be made compulsory.

The deaths registered in the year amounted to 335,956, to which must be added 2,704 deaths which occurred in the first year, and were registered in the first quarter of the second. This would make 338,660 deaths in the year, while according to former proportions, the probable number of burials entered in the parochial registers during the same period would be 291,715. Mr. Finlayson, in a communication addressed to the Registrar-General, and appended to the Report, estimated the total deaths at home, in the year ending June 30th, 1838, at 335,968.

The following is an abstract of two tables, shewing the number of registered deaths of males and females at each age, and the relative proportion of the number dying in each period.

| AGES. | Total Number of Deaths. | | | Relative Proportion out of 1000 Deaths. | | |
|-------------------|-------------------------|---------|---------|---|---------|--------|
| | Male. | Female. | Total. | Male. | Female. | Total. |
| Under 1 year* . . | 39,990 | 31,898 | 71,888 | 234·66 | 193·72 | 214·54 |
| 1 and 2 years . . | 21,672 | 21,219 | 42,891 | 127·17 | 128·85 | 128· |
| 3 , , 4 , , | 8,108 | 8,147 | 16,255 | 47·57 | 49·47 | 48·51 |
| From 5 to 9 , , | 7,821 | 7,619 | 15,440 | 45·89 | 46·27 | 46·07 |
| 10 , , 14 , , | 4,188 | 4,496 | 8,684 | 24·57 | 27·3 | 25·91 |
| 15 , , 19 , , | 5,276 | 6,172 | 11,448 | 30·96 | 37·48 | 34·16 |
| 20 , , 24 , , | 6,651 | 7,164 | 13,815 | 39·02 | 43·5 | 41·22 |
| 25 , , 29 , , | 5,966 | 6,582 | 12,548 | 35· | 39·97 | 37·44 |
| 30 , , 34 , , | 5,633 | 6,162 | 11,795 | 33·05 | 37·42 | 35·2 |
| 35 , , 39 , , | 5,518 | 5,641 | 11,159 | 32·38 | 34·25 | 33·3 |
| 40 , , 44 , , | 5,609 | 5,383 | 10,992 | 32·91 | 32·69 | 32·8 |
| 45 , , 49 , , | 5,556 | 5,047 | 10,603 | 32·6 | 30·65 | 31·64 |
| 50 , , 54 , , | 5,474 | 5,073 | 10,547 | 32·12 | 30·8 | 31·47 |
| 55 , , 59 , , | 5,716 | 5,174 | 10,890 | 33·54 | 31·42 | 32·5 |
| 60 , , 64 , , | 6,905 | 6,692 | 13,597 | 40·51 | 40·64 | 40·57 |
| 65 , , 69 , , | 6,997 | 6,888 | 13,885 | 41·05 | 41·83 | 41·43 |
| 70 , , 74 , , | 7,320 | 7,403 | 14,723 | 42·95 | 44·95 | 43·93 |
| 75 , , 79 , , | 6,868 | 7,157 | 14,025 | 40·3 | 43·46 | 41·85 |
| 80 , , 84 , , | 5,189 | 5,746 | 10,935 | 30·48 | 34·89 | 32·63 |
| 85 , , 89 , , | 2,893 | 3,435 | 6,328 | 16·97 | 20·86 | 18·88 |
| 90 and upwards | 1,068 | 1,566 | 2,634 | 6·26 | 9·51 | 7·86 |
| Unknown | 547 | 327 | 874 | .. | .. | .. |
| Total | 170,965 | 164,991 | 335,956 | 1000· | 1000· | 1000· |

* Excluding still-born children, who are not required to be registered.

Similar tables are given for each of 25 divisions of the country, which have been made with reference, as far as possible, to the natural character of the several districts, and the employments of the population.

From a very able report by Mr. Farr upon the causes of death, it appears that, in the half-year ending 31st December, 1837, the causes of death were assigned in 141,607 instances. The total deaths of males and females from each cause are given for England and Wales, and for each of 25 divisions of the country, and the annual mortality by each of 91 causes of death has been deduced from the facts registered. The proportion of deaths in 100,000 caused by each class of diseases in each division has also been calculated.

The following is an abstract of this information, the diseases being grouped together in a few classes according to their character :—

| CLASSES of DISEASES. | Total Number of Deaths distinguished. | | | Per-Centage Proportion of Deaths. | | |
|---------------------------------------|---------------------------------------|---------|---------|-----------------------------------|---------|--------|
| | Male. | Female. | Total. | Male. | Female. | Total. |
| Epidemic, Endemic, and Contagious . } | 16,190 | 16,347 | 32,537 | 22·662 | 23·297 | 22·977 |
| <i>Sporadic: viz.—</i> | | | | | | |
| Nervous system . . | 11,729 | 10,123 | 21,852 | 16·418 | 14·427 | 15·431 |
| Respiratory organs . | 18,925 | 19,597 | 38,522 | 26·490 | 27·929 | 27·203 |
| Organs of circulation | 902 | 694 | 1,596 | 1·263 | ·989 | 1·127 |
| Digestive organs . . | 5,115 | 4,735 | 9,850 | 7·160 | 6·748 | 6·956 |
| Urinary organs . . . | 683 | 133 | 816 | ·956 | ·190 | ·576 |
| Organs of generation | 13 | 1,485 | 1,498 | ·018 | 2·117 | 1·058 |
| Organs of locomotion | 505 | 424 | 929 | ·707 | ·604 | ·656 |
| Integumentary system | 158 | 106 | 264 | ·221 | ·153 | ·187 |
| Of uncertain seat . . | 7,942 | 8,265 | 16,207 | 11·117 | 11·779 | 11·445 |
| Old age | 5,674 | 7,017 | 12,691 | 7·942 | 10·000 | 8·962 |
| Violent deaths . . . | 3,605 | 1,240 | 4,845 | 5·046 | 1·767 | 3·422 |
| Total | 71,441 | 70,166 | 141,607 | 100· | 100· | 100· |

The per-centage proportion of deaths by small-pox, typhus, and phthisis, was as follows :—

| | Males. | Females. | Total. |
|--------------------|--------|----------|--------|
| Small-pox | 4·262 | 3·935 | 4·104 |
| Typhus | 6·213 | 6·567 | 6·389 |
| Phthisis | 18·152 | 21·073 | 19·599 |

With respect to the principal diseases in the first class, it appears that 2,520 persons died of scarlatina, 3,044 of hooping-cough, 4,732 of measles, and 5,811 of small-pox. The ages of 1,056 persons who died of small-pox are enumerated, and the number under 5 years of age was 887. It is probable, therefore, that the majority of the 5,811 had never been vaccinated, and that about 12,000 die annually by small-pox through the neglect of the parents.

The diseases of towns and of the open country are shewn to differ very considerably both in character and intensity. Two comparative tables of the diseases in cities and in counties are given, of which the following abstract will be found very interesting.

The first comparison is between the 32 metropolitan unions and the

five counties of Cornwall, Devon, Dorset, Somerset, and Wilts. The population of the former, according to the census of 1831, was 1,594,890, and of the latter 1,599,024. The rate of increase of the former, during the decennial period from 1821 to 1831, was 20 per cent.; that of the latter 12 per cent.: according to which, supposing the rate to remain constant, the population of the metropolis, on 1st October, 1837, would have been 1,790,451, and that of the counties 1,723,770. The area of the former is 70 square miles, and there are, therefore, 25,578 inhabitants to each square mile; while the area of the latter is 7,933 square miles, and the population 222 to each.

The second comparison is between the districts of Aston, Bath, Birmingham, Bristol, Cambridge, Carlisle, Clifton, Derby, Dudley, Exeter, Leeds, Leicester, Liverpool, Manchester, Maidstone, Newcastle-on-Tyne, Northampton, Nottingham, Salford, Sheffield, Stoke-on-Trent, Sunderland, Wolverhampton, and West Derby, embracing all the principal towns in the kingdom, and the counties of Essex, Gloucester (exclusive of Bristol and Clifton), Hereford, Norfolk (exclusive of Norwich), Suffolk, Sussex, and Westmoreland. The population of the former, in 1831, was 1,484,402, of the latter, 1,656,455. The rate of increase in the cities, from 1821 to 1831, was 31 per cent.; in the counties 11 per cent. Hence the population, on the 1st October, 1837, might be estimated at 1,762,710 in the former, and 1,776,980 in the latter. The area of the cities was 677 square miles, with a population of 2,603 to each; and the area of the counties 9,312 square miles, with a population of 190 to each square mile.

In the tables contained in the Report each disease is specified, and the sexes are distinguished; but it is necessary here to omit the latter distinction, and to group the diseases in the same manner as before.

| CLASSES of DISEASES. | First Comparison. | | Second Comparison. | |
|-----------------------------------|-------------------|-----------|--------------------|-----------|
| | Metropolis. | Counties. | Cities. | Counties. |
| Epidemic, Endemic, and Contagious | 6,562 | 3,695 | 6,204 | 2,350 |
| Sporadic:— | | | | |
| Of the Nervous system | 4,147 | 1,779 | 3,558 | 1,828 |
| „ Respiratory organs | 6,559 | 3,843 | 6,060 | 4,004 |
| „ Organs of circulation | 356 | 146 | 234 | 163 |
| „ Digestive organs | 1,689 | 940 | 1,787 | 892 |
| „ Urinary organs | 111 | 75 | 108 | 86 |
| „ Organs of generation | 252 | 137 | 208 | 128 |
| „ Organs of locomotion | 150 | 71 | 112 | 83 |
| „ Integumentary system | 27 | 27 | 35 | 28 |
| Of uncertain seat | 2,482 | 1,883 | 1,914 | 1,847 |
| Old age | 1,690 | 1,453 | 1,234 | 1,649 |
| Violent deaths | 580 | 524 | 790 | 405 |
| Not specified | 354 | 647 | 750 | 1,010 |
| Total | 24,959 | 15,220 | 22,994 | 14,473 |

From these two tables it appears that the excess of mortality in the metropolis, compared with the five southern counties of England, is 64 per cent., or, in other words, that for every 100 persons who died in those counties, 164 died in the metropolis. The comparison of the other

towns and counties is rather more favourable for the former, the proportion being as 100 to 158.

The mortality and diseases of cities vary greatly: the following comparison of the relative mortality in different parts of the metropolis will be found full of interest. It exhibits the mean annual mortality of females in each of the 32 metropolitan districts, excluding the deaths in hospitals. The females alone are shewn, as their rate of mortality is less likely to be influenced by the different nature of their occupations than that of the males.

| Unions 1 to 11. | Annual Deaths per cent. | Unions 12 to 22. | Annual Deaths per cent. | Unions 23 to 32. | Annual Deaths per cent. |
|-------------------|-------------------------|---------------------|-------------------------|-------------------|-------------------------|
| Whitechapel . . | 3·908 | St. Saviour . . } | 2·790 | Kensington . . | 2·190 |
| Shoreditch . . | 3·164 | St. Olave . . } | 2·756 | St. James . . | 2·154 |
| St. Giles . . | 3·127 | Clerkenwell . . | 2·700 | St. Marylebone . | 2·137 |
| Bethnal Green . | 3·054 | St. George, . . } | 2·662 | Islington . . | 2·130 |
| Bermondsey . . | 3·046 | Southwark . . } | 2·452 | St. Pancras . . | 2·035 |
| East London . . } | 3·014 | Greenwich . . | 2·445 | Lambeth . . | 1·994 |
| West London . . } | 2·970 | Strand . . | 2·428 | London (City) . | 1·980 |
| St. George, East | 2·958 | Poplar . . | 2·271 | Camberwell . . | 1·814 |
| St. Luke . . | 2·880 | Westminster . | 2·264 | Hackney . . | 1·814 |
| Holborn . . | 2·838 | Stepney . . } | 2·271 | St. George, Ha- } | 1·785 |
| Rotherhithe . . | | St. Martin-in-the } | | nover-square . } | |
| | | Fields . . } | | | |
| | | Newington . . | | | |
| Mean . | 3·096 | Mean . | 2·526 | Mean . | 2·003 |

It is found, from a comparison of the several districts, that, *cæteris paribus*, the mortality increases as the density of the population increases; and, where the density and the wealth of the population are the same, that the rate of mortality depends upon the efficiency of the ventilation, and of the means which are employed for the removal of impurities.

The following abstract of the mean mortality of the above districts in the three groups there distinguished will shew this in a striking manner. In this table males are included.

Mean of Districts comprising the Unions.

| | 1 to 11. | 12 to 22. | 23 to 32 |
|---|----------|-----------|----------|
| Number of square yards to one person | 57 | 78 | 217 |
| Annual rate of mortality per 100 . | 3·231 | 2·839 | 2·163 |
| Annual rate of mortality per 100, by diseases of— | | | |
| The epidemic class | ·991 | ·701 | ·495 |
| Typhus | ·324 | ·205 | ·107 |
| The nervous system | ·543 | ·467 | ·369 |
| The respiratory system | ·822 | ·768 | ·588 |
| Phthisis | ·478 | ·451 | ·354 |
| The digestive organs | ·208 | ·197 | ·155 |
| Other classes | ·758 | ·706 | ·567 |

Among the diversities which especially demand attention, and by
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which there is least danger of being led to false conclusions, are those which relate to longevity, shewing the varying proportions of deaths in old age in different portions of the kingdom. From a few instances of longevity no inference can be safely drawn; but the fact that, of the deaths in any district, a comparatively large portion is above the age of 70, is a strong presumption in favour of the healthiness of that district. These proportions are found to vary greatly. In the whole of England and Wales, out of 1,000 deaths, 145 have been at the age of 70 and upwards; while in the North Riding and northern part of the West Riding of Yorkshire, and in Durham, excluding the mining districts, the proportion has been as high as 210. In Northumberland, excluding the mining district, Cumberland, Westmoreland, and the north of Lancashire, the proportion has been 198; in Norfolk and Suffolk 196, in Devonshire 192, and in Cornwall 188. In contrast with this evidence of the large proportion of persons who attain to old age in these more thinly-peopled portions of the kingdom, we find results extremely different where the population is densely congregated. In the metropolis and its suburbs the proportion who have died at 70 and upwards has been only 104; and even this proportion is favourable when compared with that of other large towns; the proportion in Birmingham being 81, in Leeds, 79, and in Liverpool and Manchester only about 63. A comparison of the mining parts of Staffordshire and Shropshire, and of Northumberland and Durham, with the rural districts surrounding each, exhibits great differences in this respect, the former averaging 109, and the latter 176. A very marked diversity also appears in the proportion of deaths of infants in different parts of the country. In the mining parts of Staffordshire and Shropshire, in Leeds and its suburbs, and in the counties of Cambridge and Huntingdon, and the lowest parts of Lincolnshire, the deaths of infants under one year have been more than 270 out of 1000 deaths at all ages; while in the northern counties of England, in Wiltshire, Dorset and Devon, in Herefordshire and Monmouthshire, and in Wales, the deaths at that age, out of 1000 of all ages, have scarcely exceeded 180.

It is impossible to appreciate too highly the value of the information contained in this Report. One of the great advantages which it possesses, is, that the facts are given as well as the deductions, by which means the latter may be tested, and the former be employed for the purpose of new comparisons and calculations. When the system of registration shall have been perfected throughout the country, more particularly with regard to births, and when the census of 1841 shall have been taken, as we hope it will be, in as perfect a manner as circumstances will admit, we shall possess a mass of Statistical data relating to our population which will open a new and vast field of improvement to the legislator, the actuary, and the physician, and is calculated to bring about results of important advantage, not only to this country, but to the whole human race.
